

WHAT IS CLAIMED:

1 1. A method for use in a packet server, the method comprising the steps of:
 2 receiving a stream of packets; and
 3 determining that number of packets from the received packet stream that are lost
 4 over a time period;
 5 determining a number of expected packets to be lost for the received packet
 6 stream in accordance with a random loss model; and
 7 determining a burst ratio from the determined number of packets lost to the
 8 number of expected packets to be lost.

1 2. The method of claim 1 wherein the step of determining the number of packets
 2 lost determines an average length of observed bursts in the received packet stream over
 3 the time interval.

1 3. The method of claim 2 wherein the step of determining the number of expected
 2 packets to be lost determines an average length of bursts expected for a random loss
 3 packet-based network.

1 4. The method of claim 3 wherein the step of determining the burst ratio
 2 determines a ratio of the average length of observed bursts in the received packet stream
 3 over the time interval to the average length of bursts expected for a random loss packet-
 4 based network.

1 5. A method for use in a packet server, the method comprising the steps of:
 2 receiving a stream of packets; and
 3 determining a burst ratio for the received packet stream, wherein the burst ratio
 4 equals $1 / (1 + \alpha - \beta)$, wherein α is a probability of losing packet n if packet $n - 1$ was
 5 found and β represents a probability of losing packet n if packet $n - 1$ was lost.

1 6. A method for use in a packet server, the method comprising the steps of:
 2 receiving a stream of packets; and

3 determining a burst ratio for the received packet stream; and
4 changing the processing for the received packet stream as a function of the
5 determined burst ratio.

1 7. The method of claim 6 wherein the changing step alters a priority level for the
2 received packet stream.

1 8. The method of claim 6 wherein the determining the burst ratio step includes the
2 steps of:

3 determining that number of packets from the received packet stream that are lost
4 over a time period; and

5 determining a number of expected packets to be lost for the received packet
6 stream in accordance with a random loss model.

1 9. The method of claim 6 wherein the determining the burst ratio step includes the
2 steps of:

3 determining an average length of observed bursts in the received packet stream
4 over a time interval;

5 determining an average length of bursts expected for a random loss packet-based
6 network; and

7 determining the burst ratio from the average length of observed bursts and the
8 average length of bursts for the random loss packet network.

1 10. The method of claim 6 wherein the determining the burst ratio step determines
2 the burst ratio from $1 / (1 + \alpha - \beta)$, wherein α is a probability of losing packet n if packet n
3 - 1 was found and β represents a probability of losing packet n if packet $n - 1$ was lost.

1 11. A method for use in a packet server, the method comprising the steps of:
2 receiving a stream of packets; and
3 determining a burst ratio for the received packet stream; and
4 associating the determined burst ratio as a figure of merit for the packet server for
5 use in traffic planning.

1 12. The method of claim 11 wherein the determining the burst ratio step includes
2 the steps of:

3 determining that number of packets from the received packet stream that are lost
4 over a time period; and
5 determining a number of expected packets to be lost for the received packet
6 stream in accordance with a random loss model.

1 13. The method of claim 11 wherein the determining the burst ratio step includes
2 the steps of:

3 determining an average length of observed bursts in the received packet stream
4 over a time interval;
5 determining an average length of bursts expected for a random loss packet-based
6 network; and
7 determining the burst ratio from the average length of observed bursts and the
8 average length of bursts for the random loss packet network.

1 14. The method of claim 11 wherein the determining the burst ratio step
2 determines the burst ratio from $1 / (1 + \alpha - \beta)$, wherein α is a probability of losing packet
3 n if packet $n - 1$ was found and β represents a probability of losing packet n if packet $n -$
4 1 was lost.

1 15. A method comprising the steps of:
2 testing a packet server in such a way as to determine a burst ratio; and
3 associating the burst ratio as a figure of merit for the packet server.

1 16. The method of claim 15 wherein the testing step determines the burst ratio by:
2 determining that number of packets from a received packet stream that are lost
3 over a time period; and
4 determining a number of expected packets to be lost for the received packet
5 stream in accordance with a random loss model.

1 17. The method of claim 15 wherein the testing step determines the burst ratio by:

2 determining an average length of observed bursts in a received packet stream over
3 a time interval;

4 determining an average length of bursts expected for a random loss packet-based
5 network; and

6 determining the burst ratio from the average length of observed bursts and the
7 average length of bursts for the random loss packet network.

1 18. The method of claim 15 wherein the testing step determines the burst ratio $1 /$
2 $(1 + \alpha - \beta)$, wherein α is a probability of losing packet n if packet $n-1$ was found and β
3 represents a probability of losing packet n if packet $n-1$ was lost.

1 19. A packet server comprising:

2 a receiver for receiving a stream of packets; and

3 a processor for (a) determining that number of packets from the received packet
4 stream that are lost over a time period, (b) determining a number of expected packets to
5 be lost for the received packet stream in accordance with a random loss model, and (c)
6 determining a burst ratio from the determined number of packets lost to the number of
7 expected packets to be lost.

1 20. The apparatus of claim 19 wherein the processor determines the number of
2 packets lost by determining an average length of observed bursts in the received packet
3 stream over the time interval.

1 21. The apparatus of claim 20 wherein the processor determines the number of
2 packets expected to be lost by determining an average length of bursts expected for a
3 random loss packet-based network.

1 22. The apparatus of claim 21 wherein the processor determines the burst ratio by
2 a ratio of the average length of observed bursts in the received packet stream over the
3 time interval to the average length of bursts expected for a random loss packet-based
4 network.

1 23. A packet server comprising:

2 a receiver for receiving a stream of packets; and
3 a processor for a burst ratio for the received packet stream, wherein the burst ratio
4 equals $1 / (1 + \alpha - \beta)$, wherein α is a probability of losing packet n if packet $n-1$ was found
5 and β represents a probability of losing packet n if packet $n-1$ was lost.

1 24. A packet server comprising:
2 a receiver for receiving a stream of packets; and
3 a processor for (a) determining a burst ratio for the received packet stream, and (b)
4 changing the processing for the received packet stream as a function of the determined
5 burst ratio.

1 25. The apparatus of claim 24 wherein the processor changes the processing by
2 altering a priority level for the received packet stream.

1 26. The apparatus of claim 24 wherein the processor determines the burst ratio by
2 determining that number of packets from the received packet stream that are lost over a
3 time period, and determining a number of expected packets to be lost for the received
4 packet stream in accordance with a random loss model.

1 27. The apparatus of claim 24 wherein the processor determines the burst ratio by
2 determining an average length of observed bursts in the received packet stream over a
3 time interval, and determining an average length of bursts expected for a random loss
4 packet-based network, and determining the burst ratio from the average length of
5 observed bursts and the average length of bursts for the random loss packet network.

1 28. The apparatus of claim 24 wherein the processor determines the burst ratio
2 from $1 / (1 + \alpha - \beta)$, wherein α is a probability of losing packet n if packet $n-1$ was found
3 and β represents a probability of losing packet n if packet $n-1$ was lost.